

at times are toxic. The principle to be adhered to in the treatment of arteriosclerosis is not the sclerosis but the morbid changes, be they toxic or otherwise. In the senile type we have nothing to treat because it is as natural as gray hair or arcus senilis. On general principles tonic treatment is indicated, and if hyperpiesia should develop, they should be managed as the hyperpietic.

FOCAL SEPSIS IN THE GENITO-URINARY TRACT AS A CAUSE OF CONSTITUTIONAL DISEASE.¹

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THE importance of focal sepsis in its relationship to the genito-urinary tract entitles it to a prominent position in the minds of internists, general surgeons, and the various specialists.

Among the numerous septic affections involving the genito-urinary system which, untreated, are prone to lead to constitutional involvement may be mentioned acute hematogenous suppurative nephritis, pyelitis, pyelonephritis, pyonephrosis with or without calculus, tuberculosis of the kidney, renal, and perirenal abscess, ureteritis, cystitis, especially the purulent type, prostatitis, seminal vesiculitis, epididymitis, orchitis, and urethritis.

I have observed patients who have spent large sums for the correction of pyorrhea alveolaris and other dental disorders, when the real cause of complaint was centered in chronically diseased seminal vesicles. I have heard of a case on whom hundreds of dollars were spent for extensive crown and bridge work, when seminal vesicle medication and massage, or vesiculotomy or vesiculectomy, would undoubtedly have sufficed to eradicate the constitutional affection from which the patient suffered. I have treated patients, previously subjected to tonsillectomies unattended with benefit, so far as the chief indication for their performance was concerned, and observed immediate improvement when measures were directed to the diseased seminal vesicles. I have seen patients complaining of rheumatism, investigated by elaborate metabolic studies and placed on restricted diet lists, when vasopuncture and spermatocystic medication, or drainage of a seminal pyovesiculosis, would doubtless have effected a cure. How many patients treated by the general practitioner, or for that matter by the interest, the general surgeon, the orthopedist, the neurologist or the psychiatrist, in our best hospitals, complaining of symptoms

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possibly referable to diseased urethral adnexa, ever receive an examination by rectal palpation, etc., or if so by any one really qualified to express an opinion? Assuredly, the average hospital resident, to mention the least, knows little or nothing, clinically, about inflammatory prostatic involvement, much less disease of the seminal vesicles. The above assertions are made in no spirit of vindictive criticism, but solely with the desire and hope that the profession generally may be awakened to a realization of the fact that chronic seminal vesiculitis is a far more prevalent disease than the average physician surmises, that it is not accorded the consideration its medical importance demands, and that it masquerades under a manifold symptomatology finding its expression oftentimes remote from the urinary tract. In view of the high percentage of the male population who have had gonorrhea, and realizing that 90 per cent. at least of these have had posterior urethral involvement, it must be apparent to everyone that, comparatively, there are few men who have not experienced a spermatoecystitis.

The time has arrived for every practitioner of medicine to recall the anatomy of the spermatie tract—vesicle, ampulla of vas, and ejaculatory duct. Three facts stand out preëminently: (1) the tortuous nature of these tubular structures, presenting an extensive mucous surface fitted with ramifying diverticula, characterized by minute cellules and ridges, rendering the tract, when infected, the worst drained of any in the human body; (2) a most complex and delicate nervous mechanism, filaments from the hypogastric plexus penetrating intimately the muscular and mucous coats of these delicate spermatie tubular structures. Thus owing to the correlation of the prostatic, vesical, pelvic, sacral, lumbar, and hypogastric nerve plexuses the occurrence of pains referred to the anal, perineal, genital, hypogastric, and lumbar regions, also to the hip-joint, sacro-iliac synchondroses, and the thighs, becomes readily explainable; (3) the gross anatomical relationship, rendering these structures, on account of a more or less inaccessible situation, difficult of treatment, either conservatively or radically.

It is almost incredible that the seminal vesicles so closely associated with the prostate should have escaped so long consideration in investigation of the pathology of deep urethral infection while the prostate has been so thoroughly studied. Indeed in text-books, universally, the vesicles have been alluded to casually or entirely neglected; yet I believe that they share in infection equally as often as the prostate, and are far more prevalent septic foci as causes for certain neurological and constitutional disorders.

Epididymitis is always associated with a spermatoecystitis on the affected side, and recurrent epididymitis is invariably caused by a lingering infection of the seminal vesicle. The gleet discharge of a protracted gonorrheal infection is commonly due to a latent infec-

tion of the spermatic tract—the shreds originating in the vesicles—rather than a chronic process located in the prostate or posterior urethra.

As a pure gonorrheal cystitis is a condition that probably never occurs, so too are most infections of the seminal vesicles and prostate mixed. Indeed it is seldom that the gonococcus can be isolated from the vesicles either by massage or seminal vesiculotomy. On the contrary the vesicle is found to harbor a formidable array of pathogenic bacteria, among which may be named various strains of streptococci, pneumococci, staphylococci, coion bacilli, unknown Gram-negative diplococci, corynebacteria, and tubercle bacilli. Undoubtedly in many patients tagged with the diagnosis of "gonorrheal rheumatism," the gonococcus has ceased its onslaught and abandoned the trenches in the form of a chronic seminal vesiculitis, in favor of a mixed infection, of which one or more of the above-mentioned bacteria are the chief offenders. The time is ripe for the specialist as well as the general practitioner to appreciate the fact that bacterial foci, gonorrheal or non-specific, lurking often for years, in the spermatic vesicles are frequent causes for constitutional disorders in the guise of "rheumatism," articular and muscular, "rheumatoid arthritis," "arthritis deformans," "gout," hypertrophic arthritis, pains and peculiar sensations referred to the perineum, hips, thighs, back, and suprapubic regions, also a retinue of psychic disturbances as queer impulses, bordering on suicidal thoughts, panicky phobias, prone to occur on bridges, boats, trains, and in churches and theatres, dreadful dreams, loss of thought concentration, indifference to occupation and a perversion of moral character substantiating, on a pathological basis, certain tenets of the Freudian theory. To be more specific, I have frequently observed patients complaining of urinary difficulties due solely to a chronic periseminal vesiculitis and infiltration about the trigone and vesical neck, resulting in ureteral irritation and compression, and more particularly retention of urine, in one instance amounting to 15 ounces. The prevalence of epididymitis as a complication, more directly of seminal vesiculitis than of urethritis, has already been mentioned. Moreover, in this connection it should be mentioned that in the author's experience fully 50 per cent. of patients having passed through an epididymitis, exhibit a stricture of the vas deferens between the neck of the scrotum and the seminal vesicle, accounting in bilateral cases for a high percentage of sterility, not amenable to the operation of epididymovasostomy. Among other serious, if not constitutional, diseases which I have observed to be due to spermatoecystitis are synovitis, arthritis, osteoperiosteitis, cystitis, pyelitis, pleurisy, endocarditis, general cutaneous eruptions, spermatorrhea, impotence, neurasthenia, and a plethora of nervous and mental conditions. Thus in comparison with diseased tonsils and pyorrhea

alveolaris, cryptic or septic infection of the seminal vesicles runs high, and I am not at all convinced that the greater evil does not rest with the vesicles. An abstract of a few case histories may be of interest:

CASE I.—P. H. B., aged forty years, had gonorrhea twenty years ago, followed by strictures, but claims he was all right until four years ago, when, after resumption of passage of sounds on himself, suffered an attack of urethral fever and urethral discharge lasting two or three weeks. Remissions of the discharge occurred and coincidentally "rheumatism" of the hips and tremors of the thighs, associated with itching about the rectum for the past year. Patient is also troubled with some frequency of urination, and a few floating shreds are present in the urine. Sounds (Nos. 25 and 29 F.) passed easily through the posterior urethra. Rectal palpation revealed a palpable and tender right seminal vesicle, and the urine voided after massage showed an average of fourteen pus cells to the microscopic field.

Three months previously the patient had undergone a tonsillectomy, and recently an elaborate metabolic study and dietary precautions without material improvement. Under vesicular and prostatic massage with Janet irrigations and bacterin therapy, the pus cells in four weeks were reduced to five or six to the microscopic field and the tremors of the thighs had disappeared. Treatment was kept up for a few months and the patient discharged for the summer. Seen one year after his first visit he stated that, aside from a slight attack of "rheumatism" about six weeks after undertaking treatment, he had been free of attacks, with one exception, that occurring during the summer while in California.

CASE II.—A. C., aged twenty-eight years, contracted gonorrhea years ago, the attack lasting eight months; second attack four years ago, complicated by a bilateral epididymitis. His chief complaints were pain in the back, described by an orthopedist as relaxed sacro-iliac joints, premature ejaculations, and pain in left testicle, for which a well-known general surgeon had performed a varicocelelectomy unattended by any relief. The general practitioner referring the case had prescribed nerve sedatives and given hygienic instructions. On examination per rectum the regions of both seminal vesicles were infiltrated and presented finely nodular or irregular areas. Both regions were abnormally tender and the prostate seemed to be uninvolved. Both epididymes were enlarged and nodular. The urine showed shreds and many clumps of pus cells after spermatocystic massage. The gonococcus serological test resulted weakly positive. Treatment consisted in periodic massage, irrigations, urethral dilatation and bacterin therapy. In less than a month, in patient's own words, he felt "very much better," and in less than two months he was discharged, apparently cured.

CASE III.—W. A., Jr., aged thirty years, in the course of a posterior gonorrheal urethritis, on the twentieth day of his illness, developed cystitis and a left-sided spermato cystitis and epididymitis: on the twenty-sixth day pleurisy, and on the twenty-eighth day a ureteropyelitis of the corresponding side. On the same day the patient received 4 c.c. of antigonococcic serum. Next day the urine was much clearer and the following day the patient felt much better, although pleuritic friction rub was still audible. Three days after the first injection he received a second dose of antitoxin. Two days later temperature, pulse, and respiration were normal and all signs of the more serious complications had disappeared. Eighteen days later local urethral treatment in the form of massage and irrigations could be resumed and eighteen days subsequently not a shred or pus cell could be found in the morning urine.

CASE IV.—C. J., aged twenty-eight years, came to the hospital, complaining of impotence. History elicited the facts that he had passed through three attacks of gonorrhea, once complicated with bubo. He had marked frequency of urination, rising six or eight times at night. The patient called attention to vague pains, loss of weight and vigor, disability from work, and nervousness to the point of tremors. Per rectum, both seminal vesicles were palpable and doughy and the prostate slightly boggy, especially on the right side, where it was subsequently discovered that he had a stricture of the vas deferens. The gonococcus serological test was weakly positive and the Wassermann negative. Vasopuncture for medication of the seminal vesicles, followed by sounds, irrigations, and a tonic for six months restored his pus tubes apparently to a normal condition, and at least rendered him potent sexually.

CASE V.—F. R., aged forty years, contracted gonorrhea for the first time sixteen years previously; was reinfected four years later, developed a prostatic abscess six years thereafter, and has had repeated attacks of epididymitis on both sides. One year ago the patient developed heart trouble and at present is practically bedridden with a recurrent attack of epididymitis of ten days' duration. On examination the right epididymis was found enlarged and subacutely tender; the left nodular but not tender. Per rectum the prostate and seminal vesicles on both sides were a mass of chronically inflamed and tender tissue. The urine was cloudy and full of shreds and pus. The heart was markedly dilated and associated with valvular disease and insufficiency. Blood-pressure averaged 230 (systolic). Wassermann was negative, but gonococcus serological test resulted medium positive. Treatment consisted, on the subsidence of the epididymitis, of massage and Janet irrigations, supplemented with an alternation of gonococcic and autogenous bacterins. For a time the patient showed some improvement, and he has been reported (a year later) to be still alive.

CASE VI.—J. McC., aged thirty-five years, acknowledged gonorrhea seven years before. At the time of his visit to the hospital he complained of pain in the left ankle and heel, also the right foot. Examination revealed a chronic prostatitis and a palpable and tender left seminal vesicle. Urine showed few shreds, but massage and microscopic examination of the subsequently voided urine demonstrated twenty pus cells to the one-sixth objective field. Wassermann and gonococcus serological tests were negative. Under massage, irrigations, and bacterin therapy in less than two weeks the left foot showed improvement and he was much better generally. This patient has been under treatment less than two months, and although he is not yet well, he is greatly improved in every respect. The prostate and vesicles appear normal on palpation and the urine is perfectly clear.

CASE VII.—A. L., aged fifty-five years, father of two healthy children. His chief complaints are dragging pains in both groins, lack of vigor physically and mentally, dark rings under eyes without cause, and a urethral discharge. Admitted having had gonorrhea thirty-five years ago and was treated four or five weeks. Patient stated that discharge appeared three months ago, associated with severe sharp pains in rectum; dragging pains in groins occurred only two weeks ago. He has no frequency of urination, but decided urgency. On rectal palpation, the prostate was not found to be enlarged, but considerable infiltration and induration of tissues in region of seminal vesicles and neck of bladder were demonstrable; moreover, microscopic examination of the urine after massage showed an average of twelve pus cells and many clumps of pus to the one-sixth objective field. Urethral examination revealed a chronic posterior urethritis and 15 ounces of residual urine. The Wassermann was negative, but the gonococcus serological test was weakly positive. This case is obviously one of retention of urine due to urinary obstruction on account of a seminal perivesiculitis and pericystitis. The usual treatment directed to the seminal vesicles and posterior urethra has already resulted in considerable improvement, although the case was seen only ten days ago.

CASE VIII.—H. S., aged twenty-seven years, admitted gonorrhea for the first time five years ago, with two recurrences since, the present attack being of two months' duration. A slight mucopurulent discharge was present at the external urinary meatus. The urine was full of shreds and rectal examination demonstrated a prostate normal by palpation, although subsequently a stricture of large size was found in the posterior urethra. Although the patient received no drug other than salol, ten days after his first visit, he called my attention to a punctate, papular eruption on the arms, which in the course of two weeks developed into a general papulosquamous roseola, which after negative Wassermann and positive gonococcus serological tests was diagnosed as a *gonorrheal*

roseola (Fig. 1). This opinion was concurred in by Dr. Jay F. Schamberg. The administration of antigonococcal serum on three occasions in the course of eight days, possessed an immediate and specific effect and the eruption had completely disappeared by the end of two weeks. At this time also the gonococcus serological test became negative. Subsequent treatment for a few weeks was devoted to the stricture and chronic posterior urethritis.



FIG. 1.—H. S. Gonorrheal roseola of two weeks' duration. (Photograph of colored drawing.) See Case VIII.

CASE IX.—E. I. B., aged thirty-five years, was referred to me with a "rash all over the body," of three weeks' duration, with the history that he had three small chancres seven years previously, when he had his first attack of gonorrhea. He admitted four attacks of urethritis, the last two months ago or five weeks prior to the present cutaneous eruption. Temperature and pulse were normal. The epitrochlear lymph nodes were palpable, but the postcervical were not. The entire body, excepting face and palms, were covered with pin-point to 2 mm.-sized, punctate, bright red papules, each with definite infiltration (Fig. 2). The urine was cloudy and contained many heavy shreds. Per rectum the prostate

felt normal, but both seminal vesicles were enlarged, hard, and unduly sensitive. The Wassermann was negative, but the gonococcus serological test resulted weakly positive. No subsidence was noted in roseola for two weeks under the usual treatment, including gonococcic bacterin, when bilateral vasopuncture was performed and both seminal vesicles medicated with a 10 per cent. solution of collargol. Ten days later the eruption was scarcely

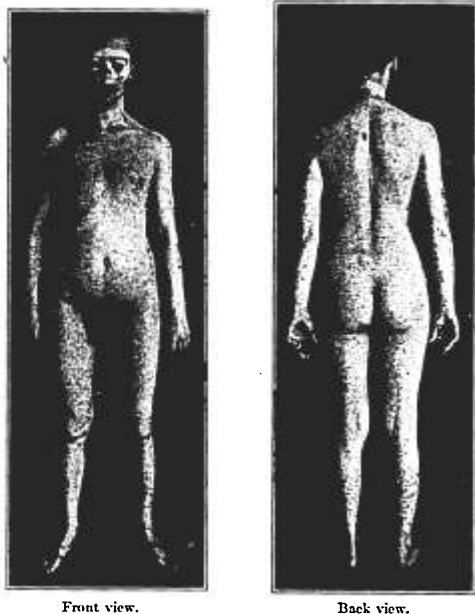


FIG. 2.—E. I. B. Gonorrheal roseola of three weeks' duration. See Case IX.

visible. Although from this time on, the patient never exhibited a return of further constitutional trouble, in view of a persistent nodule in left vesicle and an excess of pus in his urine after massage, he has been advised to have a repetition of vasopuncture or seminal vesiculotomy or vesiculectomy.

The medical profession owes a debt of gratitude to Jordan Lloyd of Birmingham, England, for his pioneer work as far back as

1888 in directing attention to the importance of spermatocystitis, the significance of its pathology and symptomatology and the demonstration of an operative procedure of merit, also to Fuller and Belfield in this country, for popularizing the operative treatment of this obdurate disease.

It is undoubtedly true that the vast majority of patients who fall victims of gonorrhea, complicated by seminal vesiculitis and prostatitis, sustain what is commonly known as the catarrhal form, and the inflammation, after running its usual course, ends in resolution. Again in those men suffering from a more deeply seated form of the disease, proper massage and total irrigations suffice in most cases to effect a satisfactory cure. Thus operation should be considered only after massage has failed and since the particular operative procedure to be adopted depends upon the morbid process present in the vesicle, vas or ejaculatory duct, it behooves the surgeon to ascertain the nature and extent of the pathological lesions present. This knowledge may be acquired by rectal palpation, massage, microscopic examination of the expressed vesicular content, bacteriological examination, needle puncture of the vas in an attempt to detect strictures by the injection of solutions of sterile water and methylene blue and occasionally by roentgenography of the vesicles. Dependent upon the information obtained, massage and irrigations with or without bacterin therapy, vasopuncture, and spermato-cystitic medication, repeated if necessary, vesiculotomy and vesiculectomy must be done in indicated cases, if we hope to eradicate this intractable disease and avoid, in many cases, systemic invasion.

HEAD COLDS FROM THE STANDPOINT OF THE INTERNIST: THEIR RESULTS AND TREATMENT.

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HEAD cold, variously denominated coryza, catarrh, la grippe, etc., is such a common complaint in this latitude that one is almost disposed to think of it as a necessary evil. How few ever consult a physician for this ailment. Yet unquestionably it is the cause of a vast monetary loss as well as an inestimable amount of suffering and pain. In 1911 the Boston Board of Commerce instituted an inquiry into the economic loss of colds, both as to time and money, and the results are rather startling. It was found that one-half of the population of Boston suffer from a cold during six months of the year. One-fifth of the population are absent from work all of the time as a result.